

FEB 19 2008

Application No. 09/593,591
Amendment dated February 19, 2008
Reply to Office Action of December 17, 2007**REMARKS**

Applicant amended independent claims 1, 85, 163, 203, 223, and 263 to further define Applicant's claimed invention. Support for the amendment to independent claims 1, 85, 163, 203, 223, and 263 is found at least in FIG. 10 of the application. No new matter has been added.

In the Office Action, the Examiner rejected claims 1, 2, 4, 5, 7-12, 14, 16, 85, 86, 88, 89, 91-96, 98, 100, 102-105, 116, 117, 163, 164, 166, 168-173, 175, 179-180, 203, 204, 206, 208, 209, 211, 213, 215, 223, 224, 228-229, 231, 233, 235, 239, 240, 263, 264, 266, 268-269, 271, 273, 275, 279, and 280 under 35 U.S.C. § 102(e), as being anticipated by U.S. Patent No. 5,989,289 to Coates et al. ("Coates"); rejected claims 1, 2, 4, 5, 7-20, 22, 25, 30, 32-35, 85, 86, 88, 89, 91-106, 109, 114-119, 127-129, 148, 158, 163, 164, 171, 174, 175, 179, 180, 203, 204, 206, 208-211, 213-215, 219, 220, 223, 224, 226, 228-231, 233-235, 239, 240, 263, 264, 266, 268-271, 273-275, 279, and 280 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,277,149 to Boyle et al. ("Boyle"); rejected claims 26-29, 110-113, 149-152, 159-162, 172, 177, 178, 182, 212, 217, 218, 222, 232, 237, 238, 242, 272, 277, 278, and 282 under 35 U.S.C. § 103(a) as being unpatentable over Boyle, further in view of U.S. Patent No. 5,397,364 to Kozak et al. ("Kozak"); rejected claims 36-42, 120-126, 166, 168-170, 173, 181, 206, 221, 241, and 281 under 35 U.S.C. § 103(a) as being unpatentable over Boyle in further view of the suggestions of Boyle; and rejected claims 23, 24, 107, 108, 176, 216, 236, and 276 under 35 U.S.C. § 103(a) as being unpatentable over Boyle in view of U.S. Patent No. 5,669,909 to Zdeblick et al. ("Zdeblick").

Applicant amended independent claims 1, 85, 163, 203, 223, and 263 to recite an interbody spinal fusion implant having a body and an opening coincident with the medullary canal, a majority of the opening being between the leading end of the body and a plane perpendicular to and bisecting the length of said body "into two parts of equal maximum length" along the mid-longitudinal axis. Neither Coates nor Boyle teach or suggest such structure.

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Coates teaches a spinal spacer (110, 300) having an opening (130) between the leading and the trailing ends. (See Coates, FIGS. 1, 15). In Coates, a plane perpendicular to and bisecting the length of the implant into two parts of equal maximum length along the mid-longitudinal axis would pass through the opening (130) such that the area of the opening between the bisecting plane and the leading end of the implant would be equal to the area of the opening between the bisecting plane and the trailing end of the implant. Boyle teaches an implant having an opening (26) between the leading and the trailing ends. (See Boyle, FIGS. 10-12, 19.) In Boyle, a plane perpendicular to and bisecting the length of the implant into two parts of equal maximum length along the mid-longitudinal axis would pass through the opening (26) such that the area of the opening between the bisecting plane and the leading end of the implant would be equal to the area of the opening between the bisecting plane and the trailing end of the implant.

Coates and Boyle do not disclose or an implant having "a majority of said opening being between said leading end of said body and a plane perpendicular to and bisecting the length of said body into two parts of equal maximum length along the mid-longitudinal axis" as recited in independent claims 1, 85, 163, 203, 223, and 263.

Several advantages are offered by a bone ring implant having an opening in accordance with the claimed invention. For example, such structure permits keeping the trailing end of the bone ring relatively intact and only cutting the straight portions of the leading end and exterior sides to form the implant. Such a configuration permits better utilization of the bone ring by leaving a significant portion of the bone ring intact proximate the trailing end of the implant. (See Specification, page 8, lines 5-17; page 9, line 17 to page 10, line 4; and Figs. 2A, 2B, and 10.)

Applicant submits that the rejections of claims 1, 2, 4, 5, 7-12, 14, 16, 85, 86, 88, 89, 91-96, 98, 100, 102-105, 116, 117, 163, 164, 166, 168-173, 175, 179-180, 203, 204, 206, 208, 209, 211, 213, 215, 223, 224, 228-229, 231, 233, 235, 239, 240, 263, 264, 266, 268-269, 271, 273, 275, 279, and 280 under 35 U.S.C. § 102(e) over Coates; and claims 1, 2, 4, 5, 7-20, 22, 25, 30, 32-35, 85, 86, 88, 89, 91-106, 109, 114-119, 127-129, 148, 158, 163, 164, 171, 174, 175, 179, 180, 203, 204, 206, 208-211, 213-

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215, 219, 220, 223, 224, 226, 228-231, 233-235, 239, 240, 263, 264, 266, 268-271, 273-275, 279, and 280 under 35 U.S.C. § 103(a) over Boyle have been overcome.

It is submitted that the rejections of claims 26-29, 110-113, 149-152, 159-162, 172, 177, 178, 182, 212, 217, 218, 222, 232, 237, 238, 242, 272, 277, 278, and 282 under 35 U.S.C. § 103(a) over Boyle in view of Kozak; claims 36-42, 120-126, 166, 168-170, 173, 181, 206, 221, 241, and 281 under 35 U.S.C. § 103(a) over Boyle; and claims 23, 24, 107, 108, 176, 216, 236, and 276 under 35 U.S.C. § 103(a) over Boyle in view of Zdeblick are rendered moot at least because these claims depend from an allowable independent claim, or claims dependent therefrom.

Applicant submits that independent claims 1, 85, 163, 203, 223, and 263 are patentable and that dependent claims 2, 4, 5, 7-20, 22-30, 32-42, 86, 88, 89, 91-129, 148-152, 155-162, 164, 166, 168-182, 196, 204, 206-222, 224, 226, 228-242, 256, 264, 266, and 268-282, dependent from one of independent claims 1, 85, 163, 203, 223 and 263, or claims dependent therefrom, are patentable at least due to their dependency from an allowable independent claim.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing the claims in condition for allowance. Applicant submits that the proposed amendments of claims 1, 85, 163, 203, 223, and 263 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner. Applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicant submits that the claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

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To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-3726.

Respectfully submitted,

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